

## ABSTRACT

**[0054]** An apparatus for separating a mixed particulate material into particles of at least two different specific gravities or ranges of specific gravity, wherein the apparatus comprises an air compressor for providing compressed air into the discharge tube, which, through the venturi effect, creates a vacuum in a connecting hose. The connecting hose is connected to the top of a separation chamber wherein the mixed particulate material, which is vacuumed in by a vacuum hose, is separated and the particles fall into a hopper, while the lighter material is discharged from the discharge tube by virtue of the vacuum created by the flow of compressed air. A conveyor can be used to collect either or both of the lower and higher specific gravity materials, and bring them to other locations. A number of different sensors can be added to the automatic unloader valve to determine when a pre-determined amount of material has been collected. The entire operation of the apparatus can be controlled by a computer, which can also be connected through a network to other computers whereby the apparatus for separating materials can be operated remotely.